

### Amendments to the Claims

Please amend as follows:

- Claim 1 (Currently Amended) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in a biological sample, which method comprises determining whether Disabled 1 protein (Dab1) ~~comprising SEQ ID NO:3~~ in said sample is phosphorylated on a serine selected from the group consisting of a serine ~~corresponding to~~ at position 491 of the polypeptide encoded by SEQ ID NO:4 or SEQ ID NO:5 and a serine ~~corresponding to~~ at position 515 of the polypeptide encoded by SEQ ID NO:4 or SEQ ID NO:5, wherein phosphorylation of Dab1 on said serine indicates the presence of active Cdk5 in said sample.
- Claim 2-3 (Canceled)
- Claim 4 (Previously Presented) The method of claim 1 wherein said biological sample is isolated from an organism selected from the group consisting of mouse and human.
- Claim 5 (Previously Presented) The method of claim 1 wherein said biological sample is isolated from the group consisting of brain and blood.
- Claim 6 (Previously Presented) The method of claim 1 wherein said biological sample is isolated from a cell culture.
- Claim 7 (Original) The method of claim 1 wherein said Dab1 phosphorylation occurs *in vivo*.
- Claim 8 (Previously Presented) The method of claim 1 which comprises immunoprecipitating said Dab1 from said biological sample prior to said determining step using an antibody that binds to Dab1 phosphorylated and unphosphorylated on said serine.
- Claim 9 (Canceled)
- Claim 10 (Previously Presented) The method of claim 1 wherein Dab1 phosphorylation is determined using an antibody that binds to Dab1 only when it is phosphorylated on said serine.

- Claim 11 (Previously Presented) The method of claim 10 wherein said antibody is raised against the polypeptide fragment TPAPRQSS(PO<sub>4</sub>)PSKSSA (SEQ ID NO:3 which contains a phosphate group on the 8<sup>th</sup> amino acid).
- Claim 12 (Canceled)
- Claim 13 (Original) The method of claim 10 wherein said antibody is polyclonal.
- Claim 14 (Original) The method of claim 10 wherein said antibody is monoclonal.
- Claim 15 (Original) The method of claim 10 wherein Dab1 phosphorylation is determined by using techniques consisting of radioimmunoassay, ELISA, "sandwich" immunoassays, immunoradiometric assays, gel diffusion precipitation reactions, immunodiffusion assays, in situ immunoassays, western blots, precipitation reactions, agglutination assays, complement fixation assays, immunofluorescence assays, protein A assays, immunoelectrophoresis assays, mass spectrometry and antibody array.
- Claims 16-31 (Canceled)
- Claim 32 (Previously Presented) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in a biological sample, which method comprises immunoprecipitation of mouse Dab1 encoded by the sequence set forth in SEQ ID NO:4 from said biological sample; contacting the immunoprecipitated Dab1 with a phosphoantibody generated using SEQ ID NO:3 having a phosphorylated serine at position 8 of SEQ ID NO:3 as an antigen; detecting binding of the phosphoantibody to serine 491 of said Dab1, wherein binding of the phosphoantibody to serine 491 of said Dab1 in such biological sample indicates the presence of Cdk5 serine kinase activity in said sample.
- Claim 33-34 (Canceled)
- Claim 35 (New) A method for detecting cyclin dependent kinase 5 (Cdk5) serine kinase activity in a biological sample, which method comprises immunoprecipitation of human Dab1 encoded by the sequence set forth in SEQ ID NO:5 from said biological sample; contacting the immunoprecipitated Dab1 with a phosphoantibody generated using SEQ ID NO:3 having a phosphorylated serine at position 8 of SEQ ID NO:3 as

an antigen; detecting binding of the phosphoantibody to serine 491 of said Dab1, wherein binding of the phosphoantibody to serine 491 of said Dab1 in such biological sample indicates the presence of Cdk5 serine kinase activity in said sample.

### **Amendment to the Sequence Listing**

In place of the sequence listing canceled in Applicant's response dated November 21, 2005, Applicants request that the paper copy of the sequence listing filed with the response dated November 21, 2005 be entered into the specification.